

AN INVESTIGATION OF POLLUTION IN THE GREEN-DUWAMISH RIVER

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Rheem Manufacturing Co., 3693 E. Marginal Way, Seattle --- Rheem manufactures hot water tanks and heaters, and liquid waste consists essentially of acid pickling liquor at the rate of 4000 gallons per month. The liquor is neutralized with soda ash prior to discharge to the Duwamish. This method of waste disposal appears to be satisfactory.

Industry	Location	Type of Waste and Specific Items in Effluent
Auburn Packing Co.	Auburn	Organic - wash water, etc.
Miller Packing Co.	Renton	Organic - wash water, etc.
Seattle Rendering Co.	Renton	Organic - wash water, etc.
Green River Cheese Co.	Tukwila	Organic - wash water, etc.
Boeing Airplane Co.	East Side River	Toxic - cyanides, chromates
Natl Fruit Canning Co.	"	Organic - wash water, etc.
Pankratz Lumber Co.	"	Organic - wood wastes, etc.
Bethlehem Steel Corp.	"	Toxic - caustic wash water
Natl Steel Const. Co.	"	Toxic - acid wash water
Kenworth Motor Truck Corp.	"	Toxic - diluted caustic wash
Rheem Mfg. Co.	"	Toxic - neutralized pickling liquor
American Wine Growers	"	Organic - wash water
Pacific Rendering Co.	"	Organic - wash water, etc.
Northwest Cooperage Co.	West Side River	Toxic - caustic wash & rinse
A & B Barrel Co.	"	Toxic - caustic wash & rinse
City Packing Co.	"	Organic - wash water, etc.
Reichhold Chemical Co.	"	Toxic - phenol, pentachlorophenol
Western Oxygen, Inc.	Harbor Island	Toxic - lime, some acetylene
Todd Shipyards Corp.	"	Toxic - accidental oil spills
Puget Sound Bridge and Dredging Co.	"	Toxic - accidental oil spills
American-Marietta Co.	"	Toxic - phenols, formaldehyde, etc.
Fisher Flouring Mills Co.	"	Organic - wash water
West Coast Wood Preserving West Waterway Company	"	Toxic - sodium arsenate

Reichhold Chemical Co., 5900 W. Marginal Way, Seattle --- The Reichhold plant at Seattle manufactures synthetic resins, formaldehyde, pentachlorophenols and hydrochloric acid. Toxic elements in the liquid waste consist of phenols and pentachlorophenols. During the summer of 1955, live box experiments conducted by the Department of Fisheries revealed highly toxic conditions existing in the vicinities of the outfall sewers on several occasions. The occurrence of these conditions of toxicity coincided with accidental slug discharges within the industry. Immediate corrective action was taken by the industry in the form of a temporary settling basin where toxic elements could be neutralized before discharge. Conditions will be further alleviated here when Reichhold moves its pentachlorophenol plant to a new location elsewhere in the State.

Boeing Airplane Co., Seattle --- Toxic wastes from Boeings consist primarily of cyanides and chromates. Both are quite toxic to aquatic life and effluent standards established by the Pollution Control Commission are 0.5 ppm for cyanide and 10 ppm for chromates. Boeing accomplishes this by means of diluting toxic wastes with Green River water until concentrations are well below the prescribed limits. However, daily tests conducted by Boeing over a period of years indicates that there have been several occasions when concentrations of either cyanide or chromate were above the established limit and in the lethal range. These violations were due to leaks, accidental spills, etc., but their continued occurrence indicates that a more satisfactory method of controlling toxic waste concentrations is necessary.

Northwest Cooperage Co., 7152 1st Ave. So., Seattle --- The Northwest Cooperage Co. is similar in operation to the A & B Barrel Co., but several times larger. Sodium hydroxide is the principal toxic waste discharged at this plant. Since the outfall sewer is located under a pier, it was impossible to obtain samples of the waste. However, on a comparative basis with findings at the A & B Barrel Co., it would appear that a similar zone of toxicity of larger dimensions exists around the point of discharge. Some procedure of correction should also be established at this plant.

